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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/535,734

11/03/2005

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EXAMINER

KNABLE, GEOFFREY L

ART UNIT

PAPER NUMBER

1791

MAIL DATE

DELIVERY MODE

03/20/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/535,734	NAKADA ET AL.	
	Examiner	Art Unit	
	Geoffrey L. Knable	1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 November 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11/14/2008</u> . | 6) <input type="checkbox"/> Other: _____ |

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claim 10 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 10 is rejected for the same reasons as set forth in the last office action. In response to this rejection, applicant argued that this was rejected for "lack of support in the specification" and paragraphs {0064}-[0065] in the specification were pointed to. This rejection was not however for lack of support but rather for lack of enablement. Further, the portions of the specification pointed to by applicant provide no further explanation in this regard. Note again that claim 10 defines preparing an "estimate equation" and then a "back calculation of said estimate equation". The original disclosure, including paragraphs [0064] and [0065] pointed to by applicant, does not however provide any more detailed description of how this estimate equation is prepared or used, this therefore being considered to represent subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention without an undue burden of experimentation. Note again that the only mention of this estimate equation in the specification is essentially repeating of the claim 10 language in the summary disclosure. No further detail or explanation is provided.

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Without any additional teaching in this regard, the artisan is left with an undue burden of speculation and experimentation to practice the invention of claim 10.

3. Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, line 9, it is still not clear what a "sequence" is referring to - in other words, this could refer to the sequence of the molding stations in building a (single) tire or a sequence of different tires overall being or to be built. Clarification is required of the scope of the claim in this regard.

Along related lines, it also is still not entirely clear exactly what claim 1 is requiring in terms of how many tires are being built within the context of the claim. In other words, although the preamble of claim 1 refers to a method "for tires in plural sizes" and claim 1, lines 9-11 refer "at least two combinations of green tires in different sizes", it is not seen where the overall method forms any more than a single tire. Note for example claim 1, line 9 refers to "molding a green tire" and the remainder of the steps up to the final tire removal step only refer to building a single tire. The scope of this claim is therefore still indefinite as it is not clear if the claim is requiring that plural different tires be built (as seems to be argued) or only a single tire (as it seems from the language). In response to this rejection, applicant refers to the claim 1 reference to "at least two combinations of green tires in different sizes" and concludes that "at least two green tires are called for in claim 1". This argument has been considered but again, if the claim is intended to be read to be requiring building more than one tire (if this is

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what is meant by “two green tires being called for”), it is not clear what steps require this as all the positive tire building steps only define and require building a single tire.

Clarification is therefore still required of the scope of this claim.

In claim 1, lines 12-14 still refer to disposing the carcass and bead cores on a “toroidal drum” but this is followed by “toroidally extending” the carcass (corresponding to the inflating “to toroidal shape” described with reference to fig. 5). As such, it still would seem that the drum is not in its “toroidal” shape when the (cylindrical) carcass band is disposed thereon. As the claim language seems to require the contrary (i.e. that the carcass is disposed on a “toroidal” drum), an ambiguity is raised. In response to this rejection, applicant has argued that “a drum can be in a toroidal shape and subsequently expanded to be a larger toroidal shape”. While this is not disputed, it is not clear that this is consistent with the described invention. In particular, when the shaping drum accepts the transferred cylindrical carcass band (fig. 4(b)), it would not be normally described by one having ordinary skill in this art as being in a toroidal shape. Rather, it would more likely be described as cylindrical. As such, it is not clear that the claim language is consistent with the described invention. Note again that the specific reference to a toroidal shape is in reference to the shaping to the toroidal shape with reference to fig. 5, this being consistent with the usual meaning of this term in this art. In other words, the toroidal molding drum would seem to be only toroidal in the sense that it is capable of shaping the carcass to toroidal shape. Clarification is therefore again required of this apparent inconsistency with the usual meaning of the term toroidal in this art as well as therefore now also the scope of what is meant by “toroidal” in this

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context as again, in fig. 4b, the carcass is transferred to what would appear to be a drum that is cylindrical.

In claim 12, with the amendments to claim 1, there is now no antecedent established for "the vulcanized tire".

4. Claims 1, 3-5, 7-9, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 448,407 to Yamakawa et al. taken in view of Okada et al. (US 2001/0002608).

This rejection is maintained for substantially the same reasons as set forth in the last office action. As to the new requirement that the drum is moved between stations, EP '407 suggests, for each of the main building/shaping positions, using drums that are indexed between stations as illustrated in fig. 3. Further, it is clear that different tires are built in a desired sequence (e.g. col. 4, line 46 - col. 5, line 12; col. 7, lines 19-23) using a building sequence and selected components specified in advance. As to the tact time, as the tact time is in essence the sequential cycle time at the building stations (i.e. the working time plus any idle time waiting for the next station to clear), it reasonably follows that a controlled sequential building process in which drums are indexed from station to station (e.g. as suggested in fig. 3 of EP '407) would follow a certain "tact time". In other words, implicit in almost any simple indexed assembly line processing is a "tact time" (in essence the cycle time) - thus, as each drum can only occupy one position at a time and cannot advance to the next station until the next drum has also moved, there is a tact time implicit in the EP '407 indexed sequential building process. Further, given the sequential nature of the plural drum assembling line type of

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processing, the tact time would have been understood as necessarily essentially equal to the processing station that takes the longest (since any given station can hold up the entire line), this essentially representing the tact time that governs the processing. With respect to claim 9 as amended, it also would have been understood by the ordinary artisan and obvious that this station corresponding to the longest processing time should also have a minimized idle time (ideally zero idle time) since all the other stations would be waiting for this station to complete its work. Further, as every additional step must necessarily wait for the tact time (i.e. the time for the tire/drum to advance out of the preceding station), it would have been understood that subsequent steps of vulcanizing, inspecting, etc. as required by claims 11 and 12 would start after the tact time.

5. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over EP 448,407 to Yamakawa et al. taken in view of Okada et al. (US 2001/0002608) as applied to claim 1 above, and further in view of at least one of [Akiyama (US 6,475,319) and Ikeda et al. (US 2002/0074077)] as applied in the last office action.

6. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over EP 448,407 to Yamakawa et al. taken in view of Okada et al. (US 2001/0002608) as applied above, and further in view of Senbokuya et al. (US 6,616,783) as applied in the last office action.

7. Applicant's arguments filed 11/10/2008 have been fully considered but they are not persuasive as regards the remaining rejections. The arguments with respect to the remaining 35 USC 112 rejections have been treated within the statement of rejection

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above. With respect to the prior art rejections, with the new claim requirement for moving the drum between stations (rather than the tire), it is agreed that the rejection based upon Okada as a primary reference is no longer applicable.

With respect to the prior art rejection based upon EP '407, it is argued that EP '407 (Yamakawa) does not discuss times and therefore "one of ordinary skill in the art cannot reasonably interpret Yamakawa as teaching or suggesting tact times when no time what so ever is discussed." This argument has been carefully considered but is unpersuasive. As noted in the statement of rejection, the tact time is in essence the sequential cycle time at the building stations (i.e. the working time plus any idle time waiting for the next station to clear), it reasonably following that a controlled sequential building process in which drums are indexed from station to station (e.g. as suggested in fig. 3 of EP '407) would follow a certain "tact time". In other words, implicit in almost any simple indexed assembly line processing is a "tact time" (in essence the cycle time) - thus, as each drum can only occupy one position at a time and cannot advance to the next station until the next drum has also moved, there is a tact time implicit in the EP '407 indexed sequential building process. Thus, although time is not specifically mentioned, the ordinary artisan would have understood that the fully controlled building process of EP '407 (e.g. col. 7) would provide a certain tact time.

It is also argued that nothing in EP '407 "teaches or suggests that different tires sizes are used sequentially". This argument is unconvincing. The entire purpose behind EP '407 is a process in which different tires can be sequentially made (e.g. col. 7, lines 19-47) - this is what is meant by building the different tire sizes in a "hybrid"

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manner. Further the capability for reordering of rim sizes is simply a further reflection of the capability of this process to build tires in any desired sequential order of tires sizes. There is no indication that this is to be able to only make the same size in succession as argued.

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Geoffrey L. Knable whose telephone number is 571-272-1220. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Geoffrey L. Knable/
Primary Examiner, Art Unit 1791

G. Knable
March 16, 2009